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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

AG BIOTECH EXPERTS CONVENE IN CALIFORNIA

The following three articles highlight conferences on agricultural biotechnology that took place in Monterey, California, November 12-17. Each was sponsored in whole or in part by the U.S. Department of Agriculture (USDA).

ABRAC ENDORSES AQUATIC STANDARDS

USDA's Agricultural Biotechnology Research Advisory Committee (ABRAC) voted unanimously to endorse written "Performance Standards for Safely Conducting Research with Genetically Modified Fish and Shellfish," at its November 17 meeting in Monterey, CA. After the vote was taken, some ABRAC members suggested that the fish paradigm was so well thought out that it should be used as a model for other risk assessment issues. The Committee and its working groups, headed by Anne Kapuscinski of the University of Minnesota, have been working on the standards for almost 2 years. Simply stated, the standards are designed to help researchers assess and manage risk when conducting recombinant research on fish, crustaceans, and mollusks.

The ABRAC recommended that the standards first be reviewed by those fish experts who attended a workshop on aquatic biotechnology in Minneapolis in August 1993 and then forwarded to USDA's Undersecretary of Agriculture for Research, Education and Economics for possible implementation. It was also suggested that state-Federal workshops be conducted around the country for the benefit of those fish geneticists who will want to follow the standards. For more information about the meeting, please call ABRAC Executive Secretary, Alvin Young, USDA/Office of Agricultural Biotechnology (OAB), at 703-234-4419; Fax: 703-235-4429.

INTERNATIONAL SYMPOSIUM EXAMINES BIOSAFETY ISSUES

Twenty years after that landmark meeting of scientists in Asilomar, CA and only 3 miles up the road in Monterey, CA, scientists again gathered to discuss hard-core issues pertaining to recombinant DNA technology. This time, however, discussion did not focus on the biohazards of working with tumor viruses, but instead on sophisticated safety data obtained after years of research in small- and large-scale field tests. And this time the meeting adjourned with a call to continue the pursuit of biosafety research rather than a proposal to temporarily embargo further scientific investigations.

The 225 participants at the "Third International Symposium on The Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms" represented 34 countries. Many were developing nations just beginning to enter the biotech arena.

Noted luncheon speaker Ding Yong, Deputy Director at the China National Center for Biotechnology Development in Beijing, said the Chinese government in 1993 implemented the "7th Command", which regulates biotechnology research and industrial and agricultural activities in China based on four levels of safety. This regulation includes provisions that carefully weigh the human and environmental impact of field testing biotech plants and microorganisms. Some products currently under investigation include tomatoes, potatoes, corn, and cotton. Yong also said China is willing to share its biosafety data with other nations.

Other speakers described the results of field testing virus resistant squash in the United States and Mexico; field assessments of papaya, cucurbits (a family of plants that includes squash and gourds), tomatoes, rhizobia, tobacco mosaic virus, potatoes, and flax; encapsidation (combining parts) of viruses in transgenic plants; gene escape in transgenic sugar beet; the biosafety results of transgenic rice plants in Japan; and allergenicity issues.

Evening workshops focused on databases for biosafety, public information and consumers' perspectives, and new risk assessment paradigms.

The symposium was sponsored by USDA; the European Commission; the Society for Techno-Innovation in Agriculture, Fisheries and Forestry in Japan; EPA; Clemson University; and the University of California in Davis, CA. Proceedings will be available in several months. For more details, please call OAB at 703-235-4419; Fax: 703-235-4429.

BIOTECH FOR DEVELOPING NATIONS

The third meeting in Monterey was a workshop on November 12 called "Agricultural Biotechnology: Beyond the Laboratory -- Access, Distribution and Utilization for Emerging Countries." It was sponsored by the University of California, the U.S. Agency for International Development (U.S. AID), and USDA. Participants discussed the evolving role

of ag biotechnology in helping developing nations. Representatives of Brazil and Kenya described biotechnology in their countries, and a Mexican official outlined how to build an infrastructure for research in development and commercialization of genetically engineered crops. Other presenters spoke about market and production issues for emerging nations, opportunities in international collaboration, and training. (See related article, "ABSP," on page 4). For more details about this workshop, please call Judith Chambers at 703-875-4219; Fax: 703-875-5344.

APHIS DE-REGULATES BIO-ENGINEERED CANOLA

USDA's Animal and Plant Health Inspection Service (APHIS) has determined that several lines of Laurate canola are no longer considered regulated articles and therefore a permit is no longer required prior to field testing, importation, or interstate movement. Calgene Inc., of Davis, CA, submitted the petition to APHIS in March 1994. The APHIS decision became effective October 31, 1994. Canola oil is derived from rapeseeds. To learn more about this decision, please contact Sivramiah Shantharam at APHIS at 301-436-7612. To receive a copy of the determination or the environmental assessment, please call Kay Peterson at 301-436-7601.

NEWS AROUND THE NATION (AND THE WORLD)

FDA GIVES NOD TO 7 MORE BIOTECH PRODUCTS

The Food and Drug Administration (FDA) gave the green light to companies seeking Federal endorsement for seven genetically altered products: 3 slow ripening tomatoes, virus resistant squash, beetle-resistant potatoes, and herbicide-tolerant cotton and soybean plants. The manufacturers of these products voluntarily submitted their products to FDA, which concluded that these plants appear to be as safe as their non-altered counterparts.

Despite FDA's acceptance, producers of some of these products still must seek approvals from USDA's APHIS and the Environmental Protection Agency (EPA). APHIS will examine plant pest issues and the EPA will be looking at plant pesticide issues. For more details, please call Brad Stone at FDA at 202-205-4144.

NEW BIOTECH SOCIETY FORMED

The International Society for the Advancement of Biotechnology (ISAB) is a newly chartered, nonprofit, international society of individuals who promote the

commercialization of biotechnology as well as ethical and safe experimental, industrial, and business practices. It was launched July 30, 1994 by Mary Ann Leibert, publisher of *Genetic Engineering News*. For more details, please write to ISAB, 4405 East-West Highway, #501, Bethesda, MD 20814-4536.

CALL FOR ABSTRACTS

The 1995 Congress on In Vitro Biology (formerly the Tissue Culture Association) will meet in Denver, Colorado, May 20-24, 1995 to discuss "Interplay of Cells with their Environment." The deadline for abstracts is January 13. For further information, please call 410-992-0946; Fax: 410-992-0949.

RUSSIA PROPOSES BIOTECH REGS

Russia has drafted legislation for control of releases of genetically modified plants and microorganisms and submitted the document to the Russian parliament, according to "Screen Newsletter" (Issue 2, September 1994), a new publication funded by the European Union. The new law is reported to be similar to legislation enacted by the United Kingdom. An English translation of the proposed measure is expected to be available soon. For more details, please write to Professor K. G. Skryabin, Director of the BioEngineering Centre, Vavilova St., 34/5, 117334 Moscow, Russia; phone: 7-95-135-7319.

In other news about Russia, the first "Who's Who" of biotechnology throughout the former USSR has been published. For details, please write to Technology Detail, 99 Kingsway North, Clifton, York YO3 6JH; phone/fax: 44-904-646-593.

ABSP: BRINGING BIOTECH TO DEVELOPING COUNTRIES

The U.S. AID sponsors research and development programs under a cooperative agreement with Michigan State University, Cornell University, Stanford Law School, and Texas A&M University. The initiative is called the Agricultural Biotechnology for Sustainable Productivity (ABSP) project, and the overall goal is to assist both the United States and developing countries in the use and management of biotechnology research tools and to help improve germplasm collection. ABSP coordinates the flow of research and policy information to scientists in developing countries through a global approach to networking. These linkages tap into expertise at all levels of government, academia, and the private sector.

Most of the crops targeted for research are selected because they are vulnerable to pests or pathogens. These include the potato, sweet potato, maize, cucurbits, and tomato. To

learn more about ABSP, please call either Judith Chambers or Catherine Ives at U.S. AID at 703-875-4219 or 4324; Fax: 703-875-5344; E-mail: cives@usaid.gov

NEW SOURCE OF PLASTIC

Scientists at the University of Warwick in central England have found a cheap source for making plastic. They used genetic engineering to splice genes from bacteria into canola, according to the October issue of *The AgBiotech Bulletin*, a Canadian publication. Plastics are usually derived from petroleum feedstocks.

IN CASE YOU WEREN'T THERE

■ **The Monterey symposium, as reported on page 2** of this news publication, was closely tracked by Jane Rissler, a senior scientist with the Union of Concerned Scientists, Washington, DC. While Rissler supported the main purpose of the meeting -- for scientists to share biosafety data -- she felt the agenda leaned too heavily toward industry and academia and did not examine any potential ecological risks of large-scale plantings of transgenic crops. She recommended that future meetings include more diverse opinions.

Concerning the ABRAC vote to endorse the fish guidelines (see first article on page 1), Rissler commended the Committee and referred to the standards as an "outstanding effort" and called for a regulatory program that will enforce appropriate oversight.

■ **Poster presentations were a major element** of the Monterey, CA biosafety symposium described on page 2. Of particular note was a presentation by researchers Supat Attathom and Sutat Srinatanapongse of the National Center for Genetic Engineering and Biotechnology in Bangkok, Thailand. They described the status of field testing transgenic plants in Thailand, a country that is trying to enhance plant and animal production through biotechnology. Guidelines for laboratory practices and field releases were issued in 1993 and include requirements for public awareness seminars and workshops. One field test was conducted earlier this year of genetically modified tomatoes, and more are on the drawing board.

Many other posters were presented from several dozen countries. Subjects ranged from the biosafety evaluation of transgenic asparagus by the New Zealand Institute for Crop and Food Research to a Michigan State University field trial of transgenic corn containing four different genes.

NEW PUBLICATIONS

■ "Food Biotechnology: Health & Harvest for our Times" A consumer-oriented pamphlet prepared by the International Food Information Council. To receive a copy, please write to IFIC, 1100 Connecticut Ave., N.W., Suite 430, Washington, DC 20036.

■ Proceedings of the U.S. AID Latin America Caribbean Region Biosafety Workshop, May 10-13, 1993, in Oracabessa, Jamaica. To receive a copy, please call 703-875-4219; Fax: 703-875-5344.

X ■ "Biotechnology and the Law in Canada," by Randall W. Marusyk and Margaret S. Swain. Published by Les Editions Yvon Blais Inc., Cowansville, Quebec. To order, please call 514-263-1086; Fax: 263-9256.

okay ✓ ■ "Survey of State Government Legislation on Biotechnology: January - September 1994." Prepared by the Biotechnology Industry Organization, Washington, DC. To order a copy, please call 202-857-0244; Fax: 202-857-0237.

■ *Opportunities in the Nutrition and Food Sciences*. Edited by Paul Thomas and Robert Earl. Prepared by the Food and Nutrition Board of the Institute of Medicine. National Academy Press, Washington, DC. 1994. To place an order, please call 1-800-624-6242.

■ "Science in the National Interest," prepared by the Executive Office of the President, Office of Science and Technology Policy. August 1994. For sale by the U.S. Government Printing Office, Superintendent of Documents, Mail stop: SSOP, Washington, DC 20402-9328 (ISBN 0-16-045186-8).

UPCOMING MEETINGS

Dec. 14-15: "Preparing for a Clinical Audit: Experience with FDA." To be held in Irvine, CA. Contact: A. Horowitz at 301-468-9252. FAX: 301-468-9253.

1995

Jan. 12: "The Green Conference". Washington, DC. Organized by the International Society for the Advancement of Biotechnology and *Genetic Engineering News*. For details, please call 301-652-4951; Fax: 301-652-3072.

Jan. 15-19, "Plant Genome III. The International Conference on the Status of Plant Genome Research." To be held at the Town & Country Hotel, San Diego, CA. Contact:

Scherago International, Inc., 11 Penn Plaza, Suite 1003, New York, NY 10001. Tel: 212-643-1750. Fax: 212-643-1758.

Jan. 18-21: "1995 U.S. Dairy Forum." LaQuinta, Ca. Sponsored by the International Dairy Foods Association. For details, please call 202-737-4332; Fax: 202-331-7820.

Jan. 28: "Aquatech '95: Pacific Rim Opportunities in Aquatic Biotechnology." Sponsored by the Canadian Aquatic Biotechnology Network. Vancouver, British Columbia. For details, please call 604-983-3173; Fax: 604-983-3183; E-mail: 75313.3121@compuserve.com

Feb. 6-9: Fourth Pacific Rim Biotechnology Conference. Melbourne, Australia. Contact Ian Prince, Dept. of Chemical Engineering, Monash University, Clayton, VIC. 3168, Australia; tel: 61-3-905-3449; Fax: 61-3-905-5686; E-mail: ian.prince@eng.monash.edu.au

Feb. 19-23: Seventh European Congress on Biotechnology. Nice, France. Call 33-1-4555-6946; Fax: 33-1-4555-4033.

March 17-23: Toward the Genetic Manipulation of Insects. Tamarron, Colorado. Sponsored by Keystone Symposia. Call 303-262-1230; Fax: 303-262-1525.

Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Any comments or suggestions may be sent to USDA/OAB, Room 1001, Rosslyn Plaza-E, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Telephone: 703-235-4419; Fax: 703-235-4429; e-mail: masner@csrs.esusda.gov. This news publication is also accessible on Internet via Gopher.

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